

REMARKS

Claims 1 and 3-9 remain pending in the present application. Claim 2 has been cancelled. Claims 1, 3 and 8 have been amended. Basis for the amendments can be found throughout the specification, claims and drawings as originally filed.

REJECTION UNDER 35 U.S.C. § 103

Claims 1, 4, and 6-9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Maeda, et al. (U.S. Pat. No. 5,289,968) in view of Nonomura, et al. (U.S. Pat. No. 6,600,137). Claims 2-3 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Maeda, et al. (U.S. Pat. No. 5,289,968) in view of Nonomura, et al. (U.S. Pat. No. 6,600,137) as applied to Claim 1 above, and further in view of Watanabe, et al. (U.S. Pat. No. 5,823,767). Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Maeda, et al. (U.S. Pat. No. 5,289,968) in view of Nonomura, et al. (U.S. Pat. No. 6,600,137) as applied to Claim 1 above, and further in view of Sustarsic, et al. (U.S. Pat. No. 3,984,289). Claim 1 has been amended to include the limitations of Claim 2 plus the limitation that the article is coated with a flux has been added. Claim 8 has been amended to define that the article is coated with a flux.

In Maeda, et al., (U.S. Pat. No. 5,289,968), and Nonomura, et al., (U.S. Pat. No. 6,600,137), the means for heating air in an atmosphere furnace is an electric heater, and therefore, an oxygen concentration in the atmosphere cannot be reduced.

In Watanabe, et al., (U.S. Pat. No. 5,823,767), a combustion type furnace interior heating device is employed as the means for heating a gas in the furnace. However, in Watanabe, et al., the object to be heated is a painted object and not one coated with a

flux. Accordingly, Watanabe, et al., does not have the problem of the deterioration of the flux or the growth of an oxide layer in the high oxygen concentration atmosphere.

On the other hand, in the present invention, since the article, on which the flux is coated, is heated by means of the combustion gas burned in the gas burner, the oxygen concentration in the preheating chamber can be reduced and the deterioration of the flux as well as the growth of an oxide layer can be suppressed.

Thus, Applicant believes Claims 1 and 8, as amended, patentably distinguish over the art of record. Likewise, Claims 3-7 and 9, which ultimately depend from Claims 1 or 8, are also believed to patentably distinguish over the art of record. Reconsideration of the rejection is respectfully requested.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: April 4, 2005

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